

### Remarks

Claims 15-16, 30, 49, and 70 are amended. Claims 1-84 are pending.

The Examiner and a supervisor are kindly thanked for the courtesies extended to Applicant's Representative in the telephonic conversation on November 30, 2005, in which the Restriction Requirement and election of species dated October 20, 2005 was discussed. In particular, it was clarified that the numbered items on pages 5 and 6 of the Restriction Requirement were each a class of species, that there were 9 not 11 classes of species on page 5 of the Restriction Requirement ("cells (whole or lysate)" falls within "sample" and "luminogenic product" is related to the "first substrate", and so "cells (whole or lysate)" and "luminogenic product" were no longer considered separate classes), and that not all of the classes necessarily applied to claims in Groups I-III (claims 1-72).

In response to the Restriction Requirement mailed October 20, 2005, Applicant provisionally elects, with traverse, the invention of claims 1-14 (Group I), directed to a method to detect the presence or amount of a first molecule for a first enzyme-mediated reaction and a second molecule for a second enzyme-mediated reaction, in which a sample is contacted with a reaction mixture for the first reaction and for the second reaction, wherein a reaction mediated by the first enzyme yields a luminogenic product, and wherein a reaction mediated by the second enzyme yields a nonluminogenic product; and in which the presence or amount of the first and the second molecules in the sample is detected. With regard to the election of a specie from a first enzyme, a first substrate, a second enzyme, a second substrate, a sample, and a fluorogenic product, Applicant provisionally elects, with traverse, the specie caspase-8, LETD-aminoluciferin, caspase-3, DEVD-rhodamine-110, a cell lysate, and rhodamine 110, respectively. Applicant believes claims 1-5 and 7-14 read on the elected species caspase-8 and LETD-aminoluciferin, and claims 1-14 read on the elected species caspase-3, DEVD-rhodamine-110, cell lysate, and rhodamine-110. Reconsideration and withdrawal of the Restriction Requirement and the election of species, in view of the remarks below, is respectfully requested.

The Restriction Requirement is traversed on the basis that the inventions are closely related. That is, claims directed to a method to detect the presence or amount of a first molecule for a first enzyme-mediated reaction and a second molecule for a second enzyme-mediated

reaction, in which a sample is contacted with a reaction mixture for the first reaction and for the second reaction, wherein a reaction mediated by the first enzyme yields a luminogenic product, and wherein a reaction mediated by the second enzyme yields a nonluminogenic product (claims 1-14; Group I) are clearly related to claims directed to a method to detect the presence or amount of a first enzyme or cofactor for a first enzyme-mediated reaction, in which a sample is contacted with a first substrate for the first enzyme, a second substrate for a second enzyme, and optionally a third enzyme, wherein a reaction between the first substrate and the first enzyme or a reaction between the third enzyme and a product of a reaction between the first enzyme and the first substrate yields a luminogenic product, wherein the second substrate and/or a product of a reaction between the second substrate and the second enzyme is/are not luminogenic, and a method of assaying an enzyme-mediated luminescence reaction, in which a sample is contacted with a first substrate for a first enzyme, a second substrate for a second enzyme, and optionally a third enzyme, wherein a reaction between the first substrate and the first enzyme or a reaction between the third enzyme and a product of the reaction between the first enzyme and the first substrate yields a luminogenic product, wherein the second substrate and/or a product of a reaction between the second substrate and the second enzyme is/are not luminogenic (claims 15-48; Group II), and claims directed to a method to detect the presence or amount of at least two molecules in a sample, in which the sample is contacted with a first substrate for a first enzyme, a second substrate for a second enzyme and optionally a third enzyme, wherein a reaction between the first substrate and the first enzyme or the third enzyme and a product of a reaction between the first enzyme and first substrate yields a luminogenic product, wherein the second substrate and/or a product of a reaction between the second substrate and the second enzyme is not luminogenic (claims 49-72; Group III). Thus, the inventions of Groups I-III are generally directed to methods of detecting in a sample two or more molecules each associated with an enzymatic reaction, where a luminescent assay is employed to detect one of the molecules and a nonluminescent assay may be employed to detect the other molecule.

The Restriction Requirement is also traversed on the basis that Restriction Requirements are optional in all cases. M.P.E.P § 803. If the search and examination of at least a portion of an entire application can be made without serious burden, the Examiner must examine it on the

merits, even though it arguably may include claims to distinct or independent inventions.

M.P.E.P. § 803. Moreover, it is submitted that Applicant should not be required to incur the additional costs associated with the filing of multiple divisional applications in order to obtain protection for the claimed subject matter. Due to the relatedness of the subject matter of at least the claims in Group I and Groups II-III as discussed above, those Groups can be efficiently and effectively searched in a single search with no additional burden placed on the Examiner. In particular, the claims in Group I and Groups II-III can be efficiently and effectively searched in a single search with no additional burden placed on the Examiner, as the claims in those Groups are in the same class (435) for search purposes.

Thus, the Restriction Requirement is properly traversed. Accordingly, reconsideration and withdrawal of the Restriction Requirement is respectfully requested.

The requirement to elect species from up to 9 classes of species is traversed on the basis that the disclosed species have a disclosed relationship. The disclosed relationship for the first enzyme is that it catalyzes a reaction that yields a luminogenic product and for the second enzyme is that it catalyzes a reaction that yields a nonluminogenic product. The disclosed relationship for the first substrate is that it is a substrate for the enzyme that catalyzes a reaction that yields a luminogenic product and for the second substrate is that it is a substrate for the enzyme that catalyzes a reaction that yields a nonluminogenic product. As for the species of sample, depending on the molecules to be detected, whole cells or lysates, or both, may be employed. Therefore, withdrawal of the species elections is respectfully requested.

Moreover, the Examiner is requested to consider that by employing the elected species for search purposes, the Examiner is searching the invention of Groups I-III, and so rejoinder of the claims in Groups II and III, with the claims in Group I, is respectfully requested.

RESPONSE TO RESTRICTION REQUIREMENT

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**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6959 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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January 26, 2006

By

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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 26<sup>th</sup> day of January, 2006.

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